

St. Bartholomew's Hospital



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St. Bartholomew's Hospital Journal,
OCTOBER 14th, 1895.

"Æquam memento rebus in arduis
Servare mentem."—Horace, Book ii, Ode iii.

AT the commencement of a new year it is always fitting to stop and glance round,—to look at our past, and as a result of its consideration, to picture in our imagination a future which shall be better both negatively and positively than our immediate past has been.

This number begins the third year of the JOURNAL's existence, and is the twenty-fifth number that has been issued. During the whole of the JOURNAL's existence there has been an uninterrupted increase in the subscribers' list, and if the contributors' list has not increased proportionately it is perhaps because contributions have not been sought with sufficient pertinacity, and because the size of the JOURNAL is limited to thirty-two columns. The great interest that old Bart.'s men have taken in it has always been a source of joy to the Editorial Staff, and will, we trust, be even greater in the future than it has been in the past.

Without doubt the Amalgamated Clubs have no cause to regret their venture, when after long and weary consideration they decided that it was their place to produce a "St. Bartholomew's Hospital Journal."

Still, amid the many details in our retrospection which give us pleasure, there are on the other hand many which we look back upon with regret,—efforts that have not been followed by success. Of these, standing out most clearly, is our attempt to improve the clinical news in the JOURNAL. This attempt dates from the earliest days of the JOURNAL, and was accentuated by an editorial in July, 1894; but little if any success has attended it.

As we remarked in the editorial referred to, no one man can see more than a very small portion of the clinical work of the Hospital. We quote two paragraphs, since they express our exact meaning. "Frequently when going round the wards with a Surgeon or Physician, one hears the remark, 'This is a most interesting case,' or one's attention is drawn to some especially interesting feature of an otherwise common case, such, for example, as an unusual combination of symptoms, or some departure from the course generally followed by such cases. Those men who are fortunate enough to be present at the time will probably make such a case the subject of a conversation with their friends at lunch, or while sitting round the fountain, and thus a limited publicity is given to a small proportion of the cases. . . . If the dresser or clerk of each case belonging to the class we have mentioned were to write a short account, not necessarily of the whole case, but of the specially interesting feature of it, and send it to the Cloak Room, addressed to the Editor, we on our part would gladly print it, and as a result the usefulness of the JOURNAL would be materially enhanced."

We would add here that a little stimulation from the house surgeons and house physicians would do much to secure our object. Many of the dressers and clerks would, we are sure, willingly send a note to the JOURNAL if they were only reminded of its existence at the time they were writing the notes of the case.

Another source of regret is the paucity of news of old Bart.'s men. Again and again we have emphasised our request that old Bart.'s men would forward us any news as regards their own doings or those of other old Bart.'s men with whom they are in touch. Certainly there has lately

been great improvement in this respect ; but, on the other hand, we frequently receive from men whose appointments have been announced, letters complaining that their qualifications have been incorrectly stated. If they would only themselves send in a notice for publication such mistakes would rarely occur.

We have been asked by some to print a "Student's Number" containing a full description of the various departments of the Hospital, with special reference to First Year's men. We cannot think that this would be acceptable to the majority of our readers, since it would involve a great amount of repetition each October. We doubt also the necessity of such a course when the First Year's man has such an army of advisers in the Warden and the Lecturers, as well as the staff of Demonstrators in the Dissecting Room and in the various laboratories.

Notes on Aseptic Surgery.

By C. B. LOCKWOOD, F.R.C.S.,
Assistant Surgeon to the Hospital.

(Continued from page 185.)

ASEPTIC surgery has made a vast addition to the number and range of surgical operations. At the same time it has altered our standard of perfection. But to attain this standard much is needed besides the exclusion of bacteria. Precision in diagnosis, knowledge of anatomy and pathology, and swiftness and dexterity in operating are as essential as ever. The details of the operation must be so familiar that attention can still be given to the supervision of those who are assisting. All this would be beyond our faculties when preoccupied with a difficult and anxious operation unless we used the simplest methods and appliances, and unless aseptic surgery had become a habit, done without reflection.

I do not propose to describe the actual performance of the operation ; that will depend upon many circumstances. But all incisions should be clean and regular, and adapted for perfect apposition. Moreover the skin incision ought to be placed so that after the operation it can be covered with the dressing far beyond its limits, and air absolutely excluded. It has made a great difference in the radical cure of hernia to transfer the incision from the scrotum to the groin. Bleeding ought to be stopped at once to prevent infiltration of the tissues with blood ; bruising and laceration ought to be avoided, and therefore everything must be done neatly and gently. Neither fingers nor instruments should be put into the wound except for a distinct purpose, and the tissues are not to be strangled with ligatures or sutures.

Swiftness in operating not only helps to diminish shock, but also lessens the dangers of infection from the air or

other sources. In many abdominal operations speed is essential to success. During the operation and before the wound is sewn up it is irrigated with biniodide of mercury lotion. This washes out any bacteria which may have entered from the air, and cleanses away blood or particles of fat. The biniodide seems to have no evil effect upon the tissues, and leaves them as fresh and clear as if they had been washed with water. The appearances are very different from those produced by irrigation with sublimate or carbolic lotion.

The wound is closed with scrupulous care. If the skin is brought into perfect apposition it speedily unites, and shuts off the depths of the wound from the atmosphere in case the dressings are imperfect or become disturbed. Moreover a much less unsightly scar is left. Before the last suture is tightened any remains of blood or lotion is squeezed from the wound, and pressure applied with sponges.

The dressing which I use nearly always consists of (a) dusting with finely powdered iodoform crystals ; (b) a layer of 5 per cent. carbolic gauze which has been soaked in biniodide lotion ; (c) a layer of alembroth wool ; and (d) an outside dressing and bandages.

The object of these dressings is as follows :—The iodoform is dusted upon the skin, especially in its folds and creases, to act as an antiseptic in case of imperfect disinfection. Should bacteria emerge from the sebaceous glands, sweat-glands, or hair-follicles, they could not multiply or spread in this layer of iodoform. Moreover the iodoform lessens the danger of blistering, and diminishes any irritation caused by the other chemicals. The iodoform also protects the wound if the dressing is disturbed by the movements of the patient. I have seen the wound of a radical cure of hernia exposed to the air, but nevertheless heal perfectly because it was protected by its covering of iodoform.

The iodoform is handed to the surgeon in a small glass bottle with a perforated cover. This bottle ought to be disinfected after it has been used for a septic or tuberculous case. It is always handed to the surgeon immersed as far as its perforated cover in antiseptic lotion. Otherwise the surgeon's hands would be infected by it, and require disinfection before he touched the rest of the dressing.

The layer of 5 per cent. carbolic gauze is soaked before application in biniodide of mercury lotion to remove and disinfect any dust which may have fallen upon it. It is usually soaked for twelve hours. In various trials it has never infected broth. It is probable that a shorter time would suffice. The gauze is wrung out as dry as possible before being put upon the wound. This layer of aseptic gauze protects the skin from the strong alembroth contained in the next layer of dressing, and it also contains a store of carbolic acid for the disinfection of any fluids which now and then escape from the wound. But as this store of carbolic

acid is small and of feeble value, a thick layer of alembroth wool is placed over the layer of carbolic gauze. This wool, as I have already said, contains 2 per cent. of sal-alembroth. It soaks up any blood or fluid, and at the same time makes them antiseptic. Therefore if by chance the fluid spread beyond the edge of the dressing, bacteria would still have difficulty in finding their way into the wound. It also diminishes the risk of air infection and equalises the pressure which is applied to the wound. The alembroth wool must be separated from the skin by a wide-spread layer of soaked gauze, otherwise it is apt to cause dermatitis and blistering.

The layer of alembroth wool is covered with an outside dressing. This consists of eight layers of carbolic gauze covered with a layer of waterproof jaconet. The outside dressing is very important, and serves several purposes. Without preventing the diffusion of gas it ought to seal the wound against the entrance of free air, or, in other words, against bacterial invasion. It ought also to prevent fluids of any kind reaching the wound from the outside. This is apt to occur when the radical cure of hernia has been done upon children. Their dressings are very prone to be wetted with urine. Should any fluids escape through the other dressings from the wound the outside dressing makes them spread amongst the alembroth wool and prevents them reaching the air. To fulfil these duties an outside dressing must be of large size, must fit very accurately, and be carefully adjusted. Of what use can it be to take all kinds of precautions before the operation, and after all leave the wound exposed to the air? A proper fit being so important, I always have outside dressings cut to pattern. Also webbing straps and buckles are sewn to the corners to keep them in position. Lastly, the outside dressing is firmly fastened on with a layer of bandaging. This both keeps it in position and makes pressure upon the wound. Sometimes an elastic bandage is required, or layers of adhesive plaster. Some kinds of outside dressings are very hard to fit and adjust, but the trouble which is taken to obtain a good fit is amply repaid. Not only is the patient more comfortable, but his movements are less likely to let the air in beneath the dressing. A radical cure of hernia is very hard to dress. It is best to make a paper pattern of the outside dressing the day before the operation. The dressings for the radical cure of hydrocele and varicocele, and for amputation of the breast ought all to be cut to pattern.

I also find that it is most advantageous to fasten the outside covering in place with straps and buckles sewn to its corners. This not only adjusts the dressing, but I have known it keep its place when the bandages have slipped. The dressing which I use for radical cure of hernia is fastened with a strap and buckle round the thigh, and another round the pelvis.

For radical cure of hydrocele, varicocele, and in operations on the scrotum or testes I use a triangular outside dressing.

This is adjusted by a strap and buckle round the waist, and by two straps which spring from the apex of the triangle, and are brought from the perineum upwards round the thighs at the gluteal fold. Pressure is obtained by stuffing wool beneath the dressing. No other bandaging is required, and the patient can move about with freedom, and is very comfortable.

A well-adjusted and secure dressing is thoroughly appreciated by the sisters and nurses. It enables them to move the patient without fear of spoiling the result.

The outside dressings for amputation of the breast, amputation of the limbs, and operations upon the head and neck, all require special precautions. However, they present few difficulties to those who understand what has to be accomplished. The dressing which I have described is almost a dry dressing.

By the time it is completed we have erected the following barriers against infection from without:—(1) An outside dressing adjusted with bandages and straps. (2) A layer of carbolic gauze and alembroth wool. (3) A layer of iodo form. (4) Accurate apposition of the skin by suturing. A the same time pressure is applied to arrest hæmorrhage and prevent inflammatory effusion. But after an aseptic operation in which the bleeding is thoroughly staunch, there is no moisture about the wound, so that no call is made upon the blue alembroth wool. As a rule there is merely a slight dry blood-stain upon the gauze which touches the cut.

This kind of dressing gives me good results. At times the carbolic gauze is apt to become rather hard, but it hardly ever blisters the skin. It is quite unusual for a wound to be dressed before it has finished healing. But when the weather is hot and the skin is delicate I sometimes use iodoform gauze instead of carbolic gauze and alembroth.

So long as the dressing fulfils the principles of aseptic surgery its composition is of minor importance. But no kind of dressing can avail if the principles of aseptic surgery are violated at other stages of the operation.

The after treatment of aseptic wounds gives little trouble. The healing is unaccompanied by constitutional symptoms, but if the operation or injuring is extensive the usual complications are to be looked for. At first there is shock, during which the mind and vital functions are depressed and the temperature lowered. Then in a few hours shock is followed by reaction, during which the pulse is quickened and the temperature moderately raised. These symptoms speedily subside, and do not recur when the wound is aseptic, and with the exception of the wound or injury the patient's health is restored. It is unnecessary after reaction is over to put the patient upon low diet, or to interfere with the minor indulgences, such as wine and tobacco; these in moderation do no harm.

The significance of a rise of temperature depends upon the kind of operation as well as upon the way in which it was done.

The course of an aseptic wound is comparable to that of a simple fracture, and in this, as is well known, moderate rises of temperature are not infrequent during reaction.

Elevations of temperature after operations have been attributed to chloroform, chilling by exposure of the surface during the operation, the absorption of carbolic acid, the ferments of coagulating blood, the nervous system, to reaction, and, lastly, to the action of bacteria.* Obviously it is rash to choose any one of these and say that it alone is the cause of fevers after operations. But when the temperature of reaction does not subside, but becomes higher, constituting traumatic fever, wound infection is probable. This traumatic fever may be due to the absorption of bacterial poisons or ptomaines from the wound, or to their passage into the circulation by the veins or lymphatics. Von Eiselsberg† has obtained *Staphylococcus aureus*, *Staphylococcus albus*, and *Streptococcus pyogenes* from the blood of ordinary cases of traumatic fever following such things as the removal of parotid tumour, Syme's amputation, and resection of tarsus; also in cases of lymphangitis and paronychia ossale. My own work upon the tissues of those who have died after high temperature, but without the usual symptoms of septicaemia or pyaemia has often revealed the unsuspected occurrence of capillary bacterial emboli. In traumatic fever bacteria enter the circulation oftener than is thought.

Aseptic wounds heal without the usual signs of inflammation. There is neither heat, redness, nor swelling, and function is soon restored. Repair is rapid, and the edges of the incision and the stitch holes preserve the natural colour of the skin. There is a singular absence of moisture, and cicatricial tissue is not developed, so that no subsequent contraction or deformity need be apprehended. If by accident or design the dressings are in contact with a raw surface they are apt to adhere and become incorporated with the reparative material.

Aseptic wounds are also singularly painless. Pain is, however, caused by many things which have nothing to do with the presence or absence of bacteria. Nervous patients imagine pains; nerves may have been injured or included in ligatures; sutures may have been pulled too tight; or the skin may have been left unavoidably stretched. Thus an aseptic wound may be painful at first, although in the end its healing is perfection.

Those kinds of healing which are called healing by immediate adhesion, healing by primary union, or healing by first intention, may be taken as types of aseptic repair. The repair of subcutaneous wounds and injuries is also typically aseptic. Healing by second intention, healing by granulation, and healing by third intention are septic processes, as are also some kinds of healing by scabbing.

* Max Edelberg ("Klinische und experimentelle Untersuchungen über das Wundfieber bei antiseptischen Behandlung," *Deutsche Zeitschrift für Chirurgie*, 1880, p. 62) gives a synopsis of literature up to 1880, but the asepticity of Professor Wahl's wounds was not tested.

† "Beiträge zur Lehre von den Mikroorganismen in Blüte fiebern der Verletzten," &c., *Wiener med. Wochenschrift*, 1886, p. 133.

The urine has sometimes to be drawn off after operations. If this be not done aseptically a troublesome and dangerous cystitis may ensue. It is quite safe and easy to boil glass, metal, and soft rubber catheters. After disinfection these should be placed in lotion, like the instruments used for any other operation. Before the catheter is passed an attempt should be made to disinfect the meatus urinarius. Although far from perfect, glycerine of carbolic (1 in 40) or glycerine and biniodide (1 in 2000) is the safest lubricant.

An aseptic wound is not dressed until it has healed. The time for the removal of the dressing therefore depends upon the nature and extent of the operation. But if a drainage-tube has been inserted to let out blood it is removed in forty-eight hours.

Drainage-tubes are used for all scrotal wounds because in that region recurrent hæmorrhage seems common, because pressure cannot be applied and because an hæmatoma easily forms in the loose cellular tissue. I also drain wounds in which large areas of cancellous bone are cut, as in Syme's amputation, or in sections through the condyles of the femur. Cancellous bone seems very apt to ooze and distend the wound with blood. Finally, I always drain when the wound passes through a septic sinus or sore, because disinfection is so uncertain.

It is a critical time to dress a recent wound. It has to be done with exactly the same precautions as the operation. Everything brought in contact with the wound is sterilised with heat and soaked in antiseptics. Those who perform or assist at the dressing prepare themselves as for an operation. As the wound ought not to be left exposed for a minute longer than is necessary everything is got ready in advance, and the tube removed, and the dressing replaced, in a smart workmanlike manner, without dawdling. When the outside dressing has been removed the field of operation is surrounded with sterilised towels, the gauze removed, the wound soaked with biniodide lotion (1 in 2000), and tube removed, and the wound dusted with iodoform and a new dressing put on.

When the wound is dressed at a later period of its repair the same precautions are taken, lest by chance a part of it should not be healed. Moreover the young reparative material does not seem very well able to resist infection, and sometimes breaks down again.

Most surgeons infer the asepticity of wounds from their clinical characters. Under some circumstances these may be relied upon, but in cases of doubt the tests which I have already described ought to be applied. The inoculation of culture media with fluid from the drainage-tube, with sutures, or with particles of epithelium, and so forth, is a delicate and reliable test.* I have learnt to look upon the slightest moisture, other than fresh blood or clear serum, as almost certain evidence of infection.

* *Leitfaden zur antiseptischen Wundbehandlung*, Von Nussbaum, Stuttgart, 1887, p. 15.

The examination of wounds by culture methods often affords unexpected results. A lumbar abscess connected with spinal caries was examined on several occasions. After a few dressings, by one who was careless, the pus contained *Staphylococcus albus*, later it contained *albus* and *citrius*, and still later it contained a putrefactive bacillus.

To avoid such dangers psoas and lumbar abscesses are now emptied, irrigated, dusted with iodoform powder, or partially filled with iodoform emulsion, and then sewn up and dressed without any drainage. When this is done aseptically the worst that can happen is the re-accumulation of the pus.

As I have already pointed out, there are many kinds of pus. Tuberculous pus, such as is found in psoas and lumbar abscesses, contains a microbe, the tubercle bacillus, which is very slow in its effects upon the tissues, and does not easily enter the circulation. But it would be most dangerous to proceed in the same way when the pus contained *Staphylococcus aureus* or *Streptococcus pyogenes*.

The tubercular pus does not always re-accumulate. Some weeks ago I explored a boy's hip and found the head of the femur carious, the joint full of pus, and an abscess in the gluteal region. The head of the femur was removed, together with some of the acetabulum, and the joint and abscess easily cleaned out, irrigated, and rubbed with iodoform. The boy's temperature fell to normal, and nothing more was seen of the abscess.

A septic sinus, ulcer, or fistula is the most serious complication of an aseptic operation. Such wounds are infested by virulent bacteria, which are only kept out of the circulation by a layer of granulation tissue. If they get into a fresh wound they excite the most acute local inflammation, and may pass along the veins and lymphatics and cause pyæmia or septicæmia. When the skin is unbroken, an amputation of the breast for malignant growth is a safe and successful operation. But when the growth has ulcerated, the mortality from septicæmia is very high. The only case of septicæmia which I have had was in a case of ulcerated carcinoma of the breast. When it occurred I had not realised the impotence of our antiseptics. Evidence was afterwards obtained which seemed to prove that the wound had been infected with bacilli from the cancerous ulcer.* Two other cases of the same kind happened within a short period.

The chemicals at our disposal for the disinfection of septic wounds and ulcers are, as I have endeavoured to show, exceedingly untrustworthy. I myself have always failed to disinfect septic sinuses or wounds when the result has been tested with culture media.† But of late much better results have been obtained by more determined efforts. I now endeavour to disinfect a septic sinus or ulcer by scraping with a Volkmann's spoon, washing at the same time with

biniodide of mercury lotion—one part in one thousand—and thoroughly rubbing with pure carbolic acid, to which enough water or glycerine has been added to keep it liquid. This is finally washed away with more lotion. If possible, the operation is planned so as to avoid the sinus or ulcer, which is shut off with gauze soaked in iodoform collodion. If the sinus cannot be excised, it is thoroughly rubbed with iodoform and drained.

I have already said that at first the aims of antiseptic surgery were not so high as they are now. But even in the beginning chemicals did away with the worst kinds of sepsis and wounds no longer stank. The most wonderful results were seen abroad. Pirogoff said these scourges of surgery, suppuration, purulent œdema, hospital gangrene, erysipelas, and tetanus, stalked "*Schritt und Tritt*" with surgery. Lindpainter wrote that hospital gangrene attacked eighty per cent. of the wounds in von Nussbaum's wards. Erysipelas was the order of the day, and was looked upon as a normal sequence; a scalp wound was never sutured; in one year eleven amputation cases out of seventeen died of pyæmia; in compound fracture purulent infection, hospital gangrene, and septicæmia ushered in a swift mortality.*

Von Nussbaum's own statements bear out those of his assistant.† Young and hearty people often died after a trifling wound of pyæmia or hæmorrhage, following upon hospital gangrene. He says that in 1846 Sédillot performed his first gastrostomy. The patient died of septic peritonitis. After Sédillot the operation was done twenty-seven times with the same result, and surgeons gave up trying to solve the problem. How altered things are now! The peritoneum is now put to much severer trials than gastrostomy, and it is unnecessary to say how it emerges from the ordeal. I myself have not been called upon to treat secondary hæmorrhage after amputation since I was house surgeon in 1880.

The surroundings under which these things happened were such as we have never experienced. Reverdin ‡ says that in 1877 Volkmann had a kind of photographic studio for an operation theatre, and wretched barracks for wards. Proper sanitary appliances were wanting, and such as might be were actually within the wards. Volkmann himself compared them to public latrines. Yet he claimed that after he began to use antiseptics he obtained excellent results.

Von Nussbaum says that surgical therapeutics have improved so much that in the Italian war of 1859 he saw a great deal of hospital gangrene, little in the Bohemian war of 1866, and none in the German war of 1870. Antiseptics had quite mastered it.§

It is probable that in British hospitals the infective diseases were never so prevalent as they were abroad. Better sanitation, better nursing, and better food, and a

* Hunterian Lectures on "Traumatic Infection," Lect. II, *Lancet*, March 9th, 1895, vol. i, p. 296, *et seq.*

† "Report on Aseptic and Septic Surgical Cases," *British Medical Journal*, May 28th, 1892.

* Quoted from Schimmelbusch.

† *Leitfaden zur antiseptischen Wundbehandlung*, 1887, 5th ed.

‡ *Antisepsie et Asepsie chirurgicales*.

§ Loc. cit., p. 30.

higher standard of personal cleanliness kept them more at arm's length. Suppuration, however, was looked upon as an ordinary occurrence, and was attended by its handmaids, erysipelas, pyæmia, and septicæmia.

Before Sir Joseph Lister used antiseptics (1864 and 1866) he lost sixteen major amputations out of thirty-five (45·7 per cent.). Afterwards (1867, 1868, 1869) he lost six out of forty (15 per cent.).*

At a later period Sir Joseph Lister performed eighty major amputations with nine deaths (11·25 per cent.). Mr. Spence did ninety-seven major amputations with a mortality of twenty-five (25·7 per cent.). These surgeons were working in the same hospital and under the same conditions, except that one used antiseptic methods and the other did not.

Last year (1894) 4219 surgical cases were treated in the wards of St. Bartholomew's Hospital,† and 1743 operations were performed, a vast number of minor operations being also done in the various out-patient departments. Six of those who were operated upon had erysipelas afterwards, but none of them died. Pyæmia occurred twice, and both patients died. Septicæmia also occurred twice after operations done for fungating cancer of the breast. Cases such as this are not, as I have pointed out, the same as those in which there is no sepsis before the operation. An ulcer, a sinus, a suppurating sore, are most dangerous complications.

Reverdin‡ says that abroad they formerly lost 90 per cent. of cases of amputation through the thigh. In ten years (1884 to 1893) 156 amputations of the thigh were done in St. Bartholomew's Hospital for disease. Twenty-one of these cases died, giving a mortality of 13·4 per cent. In the previous ten years (1874 to 1883) 192 amputations were performed through the thigh, with a mortality of twenty-nine, or 15·10 per cent. Amputations are becoming less frequent and less dangerous.

But statistics such as these give no idea of the saving of pain or of the lessened stay in the hospital. The patients, too, appreciate the new order, and seldom shrink when an operation is advised.

I have said that our hospital statistics do not record cases of suppuration; but, within my own recollection, the improvement in this respect has been very striking. Some time since I published a series of operations for the radical cure of hernia,§ but of forty-four recoveries after the radical cure of non-strangulated hernia done at the Great Northern, St. Bartholomew's, and elsewhere, thirty-six healed by first intention. Of this number thirty required a single dressing and five required two, and one, a troublesome schoolboy, required several. Of the remaining eight cases five had suppuration, which ended in the extrusion of some or all of the deep sutures; and three had very slight suppuration,

which made no appreciable difference in their healing. Since this the suppuration has been less, although the operations have been of a severer kind, so that of sixty-one cases which recovered after radical cure of non-strangulated hernia five had slight suppuration. Three of these cases occurred under house surgeons who had never prepared a case for me before. Fifty-three out of the fifty-five which healed by first intention had but a single dressing; that is to say, when the wound was dressed on the eighth day it was healed, and only needed to be protected with a little gauze or wool and a bandage. Radical cure was also done four times after the operation of kelotomy. All healed by first intention. Two were drained and required several dressings.

We consider the operation of radical cure to be one of the severest tests of aseptic surgery. In each wound a number of silk sutures are buried, and the operation is prolonged, and accompanied with a good deal of manipulation. Moreover the region is one which is hard to disinfect and keep aseptic.

The radical cure of hydrocele by excision of the parietal tunica vaginalis is a somewhat similar operation, but requires much less manipulation, and no sutures are left buried in the wound. One out of twenty-four cases of radical cure of hydrocele supplicated slightly, and in that the suppuration was due to several escapes of urine into the dressings.

In the operation for the cure of varicose veins the conditions are also favorable to suppuration. During the last two years I have notes of ten cases. In most of these both legs were operated upon, and one had thirty-one incisions. Some of the incisions supplicated slightly in one case. Those who have read Sir Benjamin Brodie's lectures will remember the horrible calamities which used to follow these operations, and which led him to give them up. Indeed, this and many other operations would not be justifiable unless we could promise security from infection. But we cannot yet promise, I regret to say, an absolute security.

When suppuration follows an operation done with aseptic precautions it is seldom or never of a severe type. Sloughing and phagedæna do not accompany it, and the patient seldom becomes ill.

In many of the cases which heal by first intention bacteria are present when the dressing is taken off on the eighth day. This is easily ascertained by inoculating culture media with sutures or anything from the wound. With the help of Mr. Maxwell and others I have repeatedly tested wounds with culture media. Our experiments are not numerous, but we estimate that half the cases are sterile. From the infected cases we have almost invariably grown skin bacteria, *Staphylococcus epidermidis albus* and *Bacillus epidermidis*. It is probable that these emerged from the sweat-glands, or sebaceous glands, or the hair-

* *Antiseptic Surgery*, Cheyne, p. 368, *et seq.*

† See "Surgical Statistics," by Mr. Berry, *St. Bartholomew's Hospital Reports*.

‡ *Loc. cit.*, p. 243.

§ *Lancet*, Nov. 25th, 1893.

follicles after the wound had healed too far for them to do any harm. Moreover these bacteria belong to kinds which are not particularly pathogenic. Their presence, however, is undesirable. Our aim is sterility. Methods which allow the presence of one kind cannot be relied upon with absolute certainty to exclude another. More information is needed as to the presence or absence of bacteria from wounds treated by aseptic methods. Many surgeons now-a-days claim to practise aseptic surgery, but hardly any have told us how far their attempts have been crowned with success. There is a profound gulf betwixt the statements "the wound healed well" and "the wound was sterile." It is strange that such simple and scientific tests as culture media are not oftener used.

THE END.

[WE understand that this series of articles on "Aseptic Surgery" will shortly be published in book form for the use of students.—ED.]

The Artificial Rearing of Infants on Cow's Milk.

By EDMUND CAUTLEY, M.D.,

Physician to the Belgrave Hospital for Children.

IN spite of the thoroughness of medical teaching, and the extensive knowledge of all the various branches of medicine which the average student and practitioner possesses, it is a matter of everyday experience and observation that the details of management requisite for the successful bottle-feeding of infants are rarely understood and still more rarely put in practice. As a general rule, the medical practitioner satisfies his conscience by telling the mother or nurse to feed the child on boiled milk and barley water; while such minor directions as to the proportions of each of these, the total amount to be given at each feed, and the number of feeds *per diem*, are left to her own sweet will and pleasure. The usual result is that the unfortunate child is overfed, becomes dyspeptic, or gets attacks of gastro-intestinal disturbance, especially colic, becomes irritable and dissatisfied, cries with pain, and is given the bottle to stop its cries, with the natural consequence that the symptoms are intensified. The mother and "her neighbour" think the child is not getting sufficient food, and a proprietary food is added to the milk; or, on the supposition that it is the cow's milk that is at fault, recourse is had, often with the sanction or even on the advice of the doctor, to some one or other of the condensed milks so largely advertised. It is exceedingly rare to find a healthy infant who cannot digest and assimilate cow's milk, properly diluted, prepared, and administered. Given a healthy child which, for some reason or other, it is necessary to wean at even a very early period of its existence, failure to bring it up on cow's milk implies carelessness or lack of skill on the part of

the doctor, provided, of course, that his directions are properly carried out, and that a good milk supply is available.

A good milk supply consists in a supply of milk of average quality, not a milk of a specially rich kind. For this reason in towns it is advisable to obtain the milk from one of the large dairy companies, rather than from a small dealer. The mixed milk from a large number of cows varies in composition to a much smaller extent than the milk of one cow; so much so that it is an absolute fallacy to suppose that the milk of one cow should be ordered. Such milk varies largely with the nature of the food, the physical health of the cow, and many other conditions. In the country it is sometimes advisable, when possible, to set one cow aside for the use of the child, and to put this cow on special diet. Recent investigations, instituted for the *British Medical Journal*, have shown that the milk supply of London is by no means satisfactory. Many of the samples were found deficient in quality, and many contained boric acid. In other words, cream is abstracted, water and preservatives are added. I believe that the milk of the large dairy companies is much more reliable, and my own analyses have proved quite satisfactory.

A due understanding of the methods to be adopted, and the principles involved in artificial feeding on cow's milk, depends upon a careful consideration of several factors.

1. The characteristics and chemical composition of human milk.
2. The characteristics and chemical composition of cow's milk.
3. The differences between human and cow's milk.
4. The preparation from cow's milk of a fluid closely allied in composition to human milk.
5. The size of the child's stomach, and the amount of food to be given at each meal.
6. The number of meals *per diem*, and the length of the intervals between each meal.
7. The mode of administration.
8. The feeding-bottle.
9. The effect of boiling upon milk.

Human milk is a sterile, alkaline fluid, containing all the proximate principles of food in varying proportions. Like the milk of cows and all other animals, it varies largely in chemical composition with the nature of the food, the mode of life and physical condition of the mother, and many other factors which are outside the scope of this paper. For our present purpose we must take an average composition. Leeds obtained the following results from the analysis of the milk of about sixty women of different nationalities, and at different periods of lactation.

TABLE A.

| | Human milk—LEEDS' analysis. | | |
|-------------------|-----------------------------|----------|----------|
| | Maximum. | Minimum. | Average. |
| Proteids | 4.86 | 0.85 | 2.0 |
| Fats | 7.00 | 2.00 | 4.0 |
| Lactose | 7.90 | 5.40 | 7.0 |
| Ash | 0.37 | 0.13 | 0.2 |

Other observers give somewhat different results, tabulated below for the purposes of comparison.

TABLE B.

| | LEEDS. Results obtained from 60 women. | LUFF. Analysis of the milk of 12 women; made for Cheadle. | MEIGS. Results obtained from 43 women. | ROTCH. Mean analysis from the results of many other observers. |
|---------------|---|---|---|--|
| Proteid . | 2'0 ... | 2'35 ... | 1'046 ... | 1'0—2'0 |
| Fat . | 4'0 ... | 2'41 ... | 4'283 ... | 3'0—4'0 |
| Carbo-hydrate | 7'0 ... | 6'39 ... | 7'407 ... | 7'0 |
| Ash . | 0'2 ... | 0'34 ... | 0'101 ... | 0'2 |

Leeds' analysis, being based on a large number of observations and carried out with extreme care, and according to the most recent methods, is much the most trustworthy. Reference to the first table shows that the percentage of lactose varies within comparatively small limits, and it is noticeable that all four observers give the average percentage of about seven. On the other hand, there is a very great variation in the amount of proteid and of fat.

Cow's milk, like human milk, is sterile when contained in the udder, and faintly alkaline; by the time it reaches the consumer it is acid and crowded with micro-organisms. Its chemical composition is similar to that of human milk, but the percentages of the different constituents vary. Table C gives the mean of eight analyses of cow's milk obtained from a shop of one of the big dairy companies. The fat was estimated by Schmidt's process. The proteids were calculated by estimating the nitrogen in the precipitates produced (a) by tannic acid; (b) by acetic acid; (c) by the addition of tannic acid to the filtrate after precipitation and separation of the precipitate of caseinogen. The lactose was estimated by Fehling's method, and the ash according to the usual method. I used other methods also in the estimation of the lactose, but found that Fehling's was the simplest and most reliable. The results are reduced to percentages.

TABLE C.

| | | | | |
|------------|--------------|-----|---|------|
| Water . | . | . | . | 87 |
| Solids . | . | . | . | 13 |
| Proteids { | Caseinogen | 2'6 | . | 4'06 |
| | Lact-albumin | 1'4 | . | |
| Fats . | . | . | . | 3'70 |
| Lactose . | . | . | . | 4'48 |
| Ash . | . | . | . | 0'76 |

These results agree very closely with those obtained by other observers. Thus Leeds (Table D) gives as the result of numerous analyses—

TABLE D.

| | Maximum. | Minimum. | Average. |
|------------|----------|----------|----------|
| Proteids . | 6'0 ... | 3'0 ... | 3'76 |
| Fats . | 6'0 ... | 3'0 ... | 3'75 |
| Lactose . | 5'5 ... | 3'5 ... | 4'42 |
| Ash . | 0'9 ... | 0'6 ... | 0'68 |

It is evident that the mixed milk of a herd is not so variable in composition as human milk. As a general rule I found that the proportion of caseinogen to lact-albumin in cow's milk is as two to one.

The differences between cow's milk and human milk.—

Reference to the above analyses shows that cow's milk contains much more proteid, much less lactose, and about the same amount of fat. It is also acid and not sterile, and contains more salts.

Not only do the proteids differ in total amount, but there is considerable difference in the proportions of one to the other. The proportion of proteid coagulable by acid to the proteid not so coagulable is very much greater in cow's milk than in human milk. In other words, cow's milk contains much caseinogen and little albumen, while human milk contains little caseinogen and much albumen. Further analyses of human milk are required with reference to this point.

Taking my own analysis of cow's milk, I find that the average amount of caseinogen is 2'6 per cent. It requires the addition of at least three times the quantity of water to a sample of cow's milk in order that the curd, produced by the addition of acetic acid, should be as fine as that of human milk. Arguing from this, the percentage of caseinogen in human milk cannot be more than 0'65, and consequently there is at least twice as much albumen as caseinogen in human milk. It is possible, too, that the caseinogen of cow's milk is different in kind from that of human milk.

The preparation from cow's milk of a substitute for human milk.—The method usually adopted is to obtain some cow's milk, add an equal or larger quantity of water, a little cream, sugar, and lime water. In adding cream to make up for the deficiency in fat it must be remembered that the amount of fat varies very largely in cream, according to the mode of separation. Good average cream contains about 20 per cent. of fat. Cream also contains a considerable quantity of proteid, practically the same amount as is present in the milk, or a little less.

A mixture composed as follows closely resembles human milk:

| | | |
|------------|----------|-------------------|
| Cream . | 10 parts | ... e.g. 1 ounce. |
| Milk . | 30 parts | ... 3 ounces. |
| Water . | 40 parts | ... 4 ounces. |
| Milk-sugar | 4 parts | ... 3 drachms. |

Rotch recommends a somewhat similar but more complicated mixture:

| | | |
|---------------------------------------|---|-----------|
| Cream { | Centrifugal cream, 20 per cent. fat, diluted $\frac{1}{4}$ or $\frac{1}{2}$ | 2 ounces. |
| Milk . | . | 1 ounce. |
| Lime water (diluted $\frac{1}{4}$) . | . | 2 ounces. |
| Milk-sugar solution { | Lactose 3½ ounces Water 3 ounces | 3 ounces. |

This is richer in fat and poorer in proteid than the mixture I recommend, but it has a distinct advantage in being alkaline. The former mixture can be made alkaline by adding a pinch of bicarbonate of soda, or by replacing half an ounce of the plain water by a like quantity of lime water. A great disadvantage of all these mixtures is the trouble involved in the preparation and the necessity

of buying cream as well as milk. Recently, at my suggestion, one of the dairy companies has prepared from cow's milk an artificial mixture, which, on analysis, gives the following results as compared with human milk :

TABLE E.

| | Human milk (LEEDS). | Modified milk. |
|------------------|---------------------|----------------|
| Proteids . . . | 2'0 | 1'82 |
| Fats . . . | 4'0 | 4'02 |
| Lactose . . . | 7'0 | 6'88 |
| Ash . . . | 0'2 | 0'39 |
| Total solids . . | 13'2 | 13'11 |

Although identical as far as analysis indicates, the milk is not quite the same on account of the differences in the proteids referred to above. This modified milk is alkaline, and yields with acetic acid a fine flocculent curd, finer than that yielded by cow's milk diluted with an equal quantity of water. At present the milk is undergoing a preliminary trial with a view to finding out the amount required for each feed, and whether it requires dilution. The great advantages are that it contains the solid constituents in the proportions required by the young infant, and that even when diluted these constituents maintain a constant ratio relative to each other. Hence if it be found that a delicate or atrophic child cannot digest a milk containing so high a percentage of fat and proteid, a little dilution will remedy the defect, and, if necessary, the child may be fed rather more frequently.

The size of the child's stomach and the amount of food requisite for each meal.—In order to determine how much food a child's stomach holds we can use one of two methods, either weighing before and after nursing, or by *post-mortem* determination of the actual capacity of the child's stomach at different ages and of different weights. Needless to say the former method is the more reliable. The most important facts to remember are that the child's stomach is very small during the first week, holding about half an ounce to an ounce; that during the first two months it increases fairly rapidly to about three times this size, and then remains almost stationary for about three or four months. Of course the size depends to a certain extent upon the size of the child and the degree of nutrition. An average child at birth weighs 3000—4000 grammes, and it is customary to take a hundredth part of the weight, 30—40 grammes, as the amount of food the stomach will hold, and add 1 gramme for each day during the first month.

An infant of 3000 grammes (6½ lbs.) would require, therefore, during the—

| | |
|----------------|-----------------------------|
| 1st week . . . | 30 grms. = about 1 ounce. |
| 2nd week . . . | 37 grms. = about 1¼ ounces. |
| 3rd week . . . | 44 grms. = about 1½ ounces. |
| 4th week . . . | 51 grms. = about 1¾ ounces. |

During the second month the amount may be increased gradually at the rate of a quarter of an ounce a week, the total

amounting to three ounces by the end of the ninth week. After this the feeds should be regulated as follows :

| Age. | Number of feeds. | Amount. | Total in 24 hours. |
|--------------------|------------------|------------|--------------------|
| 9 weeks—6 months . | 6 | 3—4 ounces | 18—24 ounces |
| 6—9 months . . . | 6 | 5—6 ounces | 30—36 ounces. |
| 9—12 months . . . | 6 | 6—8 ounces | 36—48 ounces. |

The Intervals between each Feed.

| Age. | Length of interval. | Number of feeds. |
|--------------------|---------------------|------------------|
| First week . . . | 2 hours | 10 |
| 1—9 weeks . . . | 2½ hours | 8 |
| 9 weeks—9 months . | 3 hours | 6 |

The first feed should be given at 5 a.m., and the time for the subsequent feeds calculated from that.

The mode of administration.—The food should be given warm, temp. 98°—100° F. It should be given slowly; a quarter of an hour is the average time for each feed. Care must be taken that the milk is fresh and pure, and that it is alkaline. Each feed should be prepared at the time required. The practice of preparing the food twice a day, and warming up the amount required for each meal, should be strongly discountenanced. Milk, even after boiling, is liable to undergo lactic acid fermentation if kept in a warm nursery and exposed to the air.

The bottle.—Two kinds are in common use; one known as the boat-shaped bottle, with a simple india-rubber teat at the end, and the other a bottle with a long india-rubber tube between it and the teat. The latter is the more commonly employed, because it gives less trouble to the attendant; the teat is put in the infant's mouth, and no further attention is required. It is dangerous because of the constant liability of particles of milk sticking in the tube, and there decomposing. Anyone who has washed out a vessel which has contained milk will understand how likely this is to happen. Of course such bottles and tubes can be kept sweet and clean if a proper amount of care and attention be bestowed upon them. The boat-shaped bottle is much easier to keep clean, but requires more attention during the feeding; the bottle must be kept tilted at an angle which will allow the teat to be kept constantly full, so as to prevent the entrance of air into the child's stomach. After the meal the bottle and appendages must be thoroughly washed in hot water to which a little soda has been added, and kept until required in a weak solution (3j to Oj) of boracic acid, being finally rinsed out in cold water before use.

The effect of boiling upon milk.—On account of the large number of micro-organisms present in milk, and because some of these are liable to be the cause of disease, such as diarrhoea, tuberculosis, typhoid, scarlatina, &c., it is absolutely essential that in towns the milk should be boiled. Once boiling for a few minutes is sufficient to destroy pathogenic germs, though not sufficient to render the milk absolutely sterile. The spores of some organisms, e.g. *Bacillus subtilis*, require exposure to even a higher temperature than 100° C. for a considerable time. In the country,

if the milk can be obtained from a thoroughly healthy cow, with all precautions as to cleanliness, it is not absolutely essential that it should be boiled. The milker's hands must be clean, the cow's udders and teats previously washed, and the milking vessel thoroughly scalded out with boiling water. The cowshed must be built and kept according to all the most recent principles of sanitary science. Even then the milk will not be sterile, but it will be unlikely to contain any pathogenic germs. An exception to this statement must be made in favour of the tubercle bacillus, for even apparently healthy cows sometimes have tuberculosis, and it is still a moot point as to whether the tubercle bacillus is likely to be present in the milk of tuberculous cows, unless the udders are diseased.

Unfortunately milk loses certain valuable properties on boiling. In many respects the value of milk as food depends upon what may be called its biological characters. Thus its proteids are closely allied to what we regard as living proteid, and boiling reduces them to the condition of dead proteid. The albumen in unboiled milk is very different from the coagulated albumen to which it is reduced by boiling. The salts also are rendered less soluble, and other chemical changes are brought about, which are the more marked the higher the temperature and the longer the exposure.

For this reason the sterilisation of milk so widely lauded and so extensively used in Germany and America has fallen largely into disuse. It has been found that infants fed on sterile milk only do not thrive as well as on unsterile milk, and that in some cases scurvy has developed.

According to Vassilieff's experiments on healthy young men, the nitrogen ingredients of boiled milk are less readily assimilated than those of unboiled milk; the fat also is less readily assimilated when the milk is boiled.

Koplik estimated the nitrogen in the diet and fæces of infants, and found that the percentage of nitrogen unabsorbed is practically the same whether the milk is Pasteurised, boiled, or sterilised, but much greater than when the milk is uncooked.

Weber experimented on calves, feeding them on skimmed milk, sterilised milk, and fresh milk. The conclusions from his experiments were that skimmed milk and sterilised milk possessed practically the same amount of nutritional value, but much less than that of fresh milk.

Hence we conclude that it is essential to boil milk for the use of infants in towns, and that such boiling deprives it of certain antiscorbutic properties and diminishes its nutritional value. To remedy these two defects it is a good plan to give the infant a little raw meat juice. In all cases when possible it is advisable not to wean the child entirely; even one meal from the breast may yield sufficient of the antiscorbutic element to make up for the deficiency in the artificial substitute. It is a popular superstition that the two milks do not agree, and that attacks of diarrhoea

occurring during weaning are due to this cause. Needless to say such attacks are due to defect in the food or mismanagement or carelessness in its preparation and administration.

Finally one consideration must be constantly borne in mind. Hand-fed infants of the middle classes are constantly overfed; hand-fed infants of the lower classes are also constantly overfed as regards quantity, and underfed as regards quality. A large amount of the success attending some practitioners in the feeding of young infants is due to the attention paid to this one point, namely, the size of the child's stomach.

Notes.

WE reprint a paragraph from the *Standard* of October 3rd which speaks of the heroism of Dr. Toller, an old Bart.'s house surgeon, at Ilfracombe:

"Later on a report was brought in that a man was on the Lee Bay Rocks, and measures were at once taken to rescue him. Several policemen and the coastguard, with Dr. Toller, went along the cliffs, and made repeated and desperate efforts to reach the man by means of ropes. The cliff is 150 feet high at the spot; but the doctor descended by a rope, at the imminent risk of his life, and, reaching the dangerous reef of rocks, administered restoratives to the unfortunate castaway, who under their influence recovered somewhat from the effects of his seven hours' exposure. When, however, efforts were made to haul him up over the cliff, it was found that he was too benumbed and exhausted to co-operate with his rescuers, and the attempt was abandoned after three hours' strenuous work. The lifeboat finally succeeded in reaching the rocks, and the man was placed on board and taken to Ilfracombe; but five minutes before the lifeboat entered the harbour, amid the cheers of a large crowd on shore, the poor castaway died. He had previously informed his rescuers that at one o'clock his vessel—a schooner, from Penzance—foundered off Bull Point, with five hands. He put on a lifebelt, and was washed on to the Lee Bay Rocks. He did not state the name of his vessel, but merely that he was captain."

* * *

THE first meeting of the Rahere Lodge was held at Frascati's Restaurant on October 8th. Five new members were initiated. We understand that a great number of names are down for initiation at the next meeting.

* * *

ADVANCED classes in anatomy and physiology for the first F.R.C.S. and various M.B. examinations are held by Mr. Waring and Dr. Edkins, and in organic chemistry by Dr. Chattaway.

* * *

WE notice that there is an exceptionally good supply of subjects in the "Rooms." Every man has already had a "part" allotted to him.

* * *

THE classes for the final F.R.C.S. are as follows:

Tuesday, 10.—Anatomy (Mr. Waring).
Wednesday, 10.—Surgery (Mr. D'Arcy Power).
Thursday, 10.30.—Clinical Surgery (Mr. Berry).

Those who wish to do Operative Surgery before Christmas are requested to enter their names in Morris's book at once.

THE arrangements for heating the Dissecting Room have been overhauled, and those who work there may look forward to a more comfortable winter than the last.

* * *

THE Farewell Dinner of the Junior Staff took place on Monday evening, September 30th, in the Resident Staff Quarters. On the occasion, owing to the prolonged hot weather, a suggestion was made that the entertainment should take the form of a cold supper rather than of a dinner. The suggestion was excellently carried out, and proved a great success. All the Resident Staff and the Juniors were present. After supper Mr. Paterson, who occupied the Chair, proposed the usual loyal toasts, and then called upon Mr. F. H. Lewis to propose the toast of the evening, "Confusion to our Successors," which he did in well-chosen, neat, and forcible language. The usual toasts were then proposed, "The House Physician," "The House Surgeon," "The Senior Staff." Mr. Belben proposed "The Engaged Men," remarking that inasmuch as our state in the medical profession depended largely on our literary ability, some of the engaged men would in the future rise to great eminence, judging from the present extent of their correspondence. Mr. Paterson then proposed "The Health of the Nursing Staff of St. Bartholomew's Hospital," which was, as usual, drunk with enthusiasm. One of the departing House Surgeons replied in a few well-chosen but pathetic sentences. After the usual votes of thanks an adjournment was made to No. 1, where the entertainment was prolonged to a late hour. There is of necessity always a tinge of sadness on coming to the end of such a happy time as falls to the lot of one of the Resident Staff, but for this one evening sorrows and regret are cast into oblivion. The present occasion was no exception to the rule.

* * *

WE notice in the *Medical Press* for October 9th a novel and startling suggestion for the solution of the "University-degree-for-London-students" problem:—"That every London diplomate of good standing should have conferred on him the M.D. Lambeth—a degree which, as is generally known, is conferred by the Archbishop of Canterbury." We agree with the author of the suggestion that "if a moderate fee were charged on 'graduation' the ecclesiastical coffers would benefit in a marked manner," and such a course would certainly do much towards shelving the monotonous and often-discussed question, "The Right to the Title of Doctor!"

* * *

WE are asked by the Electrical Department to state that much inconvenience would be avoided if cases of nævus sent up to the Electrical Department for treatment were to be sent on the proper day. This applies particularly to those cases which are sent up at haphazard from distant country places. Readers are, therefore, begged to take

notice that Thursday is the proper day, and half past one the proper time, and to earnestly requested not to send their cases at any other time.

* * *

WE are informed that, consequent upon the death of Sir William Savory, the surviving trustees, Mr. Peter Reid and Mr. W. H. Cross, have appointed Sir Trevor Lawrence and Mr. Howard Marsh, F.R.C.S., together with the Rev. Sir Borradaile Savory, trustees of the "Hospital Convalescent Home," Parkwood, Swanley. Mr. H. W. Cross has been appointed Secretary.

This Home was founded and endowed by Mr. Peter Reid (a Governor of this Hospital), the beds, 120 in number, being allotted to six of the London hospitals. The matron, Miss Curtis, and the staff nurses at the Home were all trained at Bart.'s.

* * *

Dr. TOOTH has been appointed Assistant Physician to the Hospital.

* * *

THE post of Medical Registrar is vacant. The election was fixed for the 10th inst., but postponed.

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Mr. R. C. T. EVANS has been appointed Assistant Demonstrator in Chemistry.

* * *

Mr. E. C. FINCHAM, who is well known in photographic circles as an enthusiast in "the black art," has presented to the Library an excellent autotype reproduction of the head of Prior Rahere. As most Bart.'s men know, the whilom King's Minstrel of Henry Beaulerc was the founder of St. Bartholomew's Hospital in 1123 A.D. A facsimile of this picture is now being exhibited with other of Mr. Fincham's works at the Royal Photographic Society's Exhibition, Pall Mall.

In response to many inquiries it has been decided to issue a limited number of copies of this portrait. Being autotypes they will not fade on exposure to light, and are absolutely permanent. They can be obtained from Mr. Madden, the Librarian.

Amalgamated Clubs.

NEW MEMBERS.

H. S. Maw.
V. G. Heseltine.
G. H. Forman.
S. D. Rowland.
H. J. Paterson.
A. H. Wade.
N. Buendia.
H. F. Bassano.
A. B. Edwards.
G. J. Humphreys.
A. R. Tweedie.
F. H. Ellis.
W. G. Paget.
F. M. P. Rice.
M. G. Winder.

H. D. O'Sullivan.
R. C. Elmslie.
W. E. Ll. Davies.
G. F. Furley.
C. Fisher.
R. Thompson.
A. G. Tolputt.
E. G. Smith.
F. E. Tayler.
E. E. Young.
R. H. R. Whitaker.
E. M. Niall.
L. Galsworthy.
W. W. Wingate-Saul.
R. C. Wilmot.

| | |
|-----------------------|-------------------|
| L. T. Lavan. | W. J. G. Johnson. |
| T. H. Fowler. | A. J. Woodwork. |
| J. G. Forbes. | B. B. Sapwell. |
| J. C. Sale. | V. G. Ward. |
| E. A. Donaldson-Sim. | R. H. Sankey. |
| H. Love. | R. J. Hanbury. |
| C. H. Barnes. | C. H. D. Robbs. |
| D. S. Sandiland. | E. C. Mackay. |
| A. Butler. | S. de Carteret. |
| E. Langworthy. | R. H. Paramore. |
| H. A. Kellond-Knight. | E. L. Hughes. |
| F. J. Wood. | A. C. Jordan. |
| L. Green. | R. J. Fletcher. |
| H. H. Serpell. | P. Harris. |
| N. Leonard. | F. M. Bishop. |
| V. J. Duigan. | C. L. Fort. |
| E. W. Ladell. | A. H. Donaldson. |
| T. H. Glaze. | C. S. Myers. |
| H. E. Scoones. | J. H. Kemp. |
| J. S. Williamson. | J. A. Lloyd. |
| J. B. Cook. | M. D. Wood. |

CRICKET CLUB.

THE season that has just passed has been on the whole a satisfactory one. As far as the Inter-Hospital Cup competition is concerned, it has not been brilliant. The match with University College Hospital was the worst exhibition of the season, and it was unfortunate that the team should have been so off colour on that day.

The batting averages show a decided improvement in that department, as, in addition to greatly improved form from one or two of last year's players, we have been lucky to get one or two good bats from those men who have just come up.

Apart from the form shown by Pank, the bowling has again been weak, although there were plenty of change bowlers in the team.

Coming to the general result of matches, on paper it looks bad. Out of sixteen matches played only one has been won, six lost, and no less than nine left unfinished. This preponderance of drawn matches was due in some cases to the very late arrival of our opponents, and in others to the heavy scoring.

Out of the nine drawn matches six would, as far as it is possible to say in cricket, have ended in victory for us, whilst of the other three one was doubtful, and the other two would have probably ended in defeats. In one or two cases a few minutes' more time would have been enough to finish the match. Had these matches been finished, therefore, the record would have looked much more favorable than it does at present.

The state of each drawn game at the finish was as follows:

May 11th, v. St. John's School. St. Bartholomew's had one wicket to fall and 25 runs to win.

May 18th, v. Southgate. Southgate 62 runs to win and 3 wickets to fall.

May 25th, v. Hornsey. St. Bartholomew's 24 runs to win and 7 wickets to fall.

May 30th, v. Crystal Palace. Crystal Palace 61 runs to win and 3 wickets to fall.

June 8th, Past v. Present. Present 137 runs to win and 6 wickets to fall.

July 5th, v. Hornsey. Hornsey 76 runs to win and 8 wickets to fall.

July 13th, v. Southgate. St. Bartholomew's 18 runs to win and 9 wickets to fall.

July 20th, v. Nondescripts. St. Bartholomew's 3 runs to win and 4 wickets to fall.

The season was carried on to a much later date this year than formerly, so that it was very difficult in the later matches to get a representative team, three or four places in every match at the end having to be filled up by men from the second eleven.

RESULT OF MATCHES.

| Date. | Opponents. | Ground. | Score of St. Bar. | Score of Opp. | Result. |
|------------------|--------------------|----------------|--------------------|--------------------|---------|
| Sat., May 11 .. | St. John's School. | Leatherhead | 135 for 9 wickets. | 159 | Drawn. |
| Wed., May 15... | M.C.C. & Ground | Winchmore Hill | 85 | 208 for 7 wickets. | Lost. |
| Sat., May 18 ... | Southgate | Southgate | 131 for 8 wickets. | 69 for 7 wickets. | Drawn. |
| Sat., May 25 ... | Hornsey | Winchmore Hill | 116 for 4 wickets. | 139 | Drawn. |
| Thurs., May 30. | Crystal Palace | Crystal Palace | 264 | 203 for 7 wickets. | Drawn. |

| Date. | Opponents. | Ground. | Score of St. Bar. | Score of Opp. | Result. |
|--------------------|------------------------|--------------------|---------------------------|--------------------|---------|
| Sat., June 8..... | Past v. Present | Winchmore Hill | 99 for 5 wickets. | 236 | Drawn. |
| Sat., June 15 ... | Enfield | Winchmore Hill | 156 | 183 for 6 wickets. | Lost. |
| Mon., June 17... | Univ. Coll. Hosp. | Honor Oak Park | 130 | 156 | Lost. |
| Sat., June 22 ... | Barnet | Winchmore Hill | 186 for 2 wickets.* | 70 | Won. |
| Sat., June 29 ... | Bishop's Stortford | Bishop's Stortford | 117 | 282 | Lost. |
| Fri., July 5 | Hornsey | Hornsey | 297 | 221 for 2 wickets. | Drawn. |
| Sat., July 6 | P.F. Tuckett, Esq., XI | Waldgrave Manor | 106 and 89 for 5 wickets. | 168 | Lost. |
| Sat., July 13 ... | Southgate | Winchmore Hill | 156 for 1 wkt. | 173 | Drawn. |
| Wed., July 17 ... | Clapton | Clapton | 251 for 5 wickets.* | 96 for 0 wickets. | Drawn. |
| Sat., July 20 ... | Nondescripts | Winchmore Hill | 130 for 6 wickets. | 132 | Drawn. |

* Innings declared closed.

Matches played 15. Won 1. Lost 5. Drawn 9.

BATTING AVERAGES (1ST XI).

| No. of | Times | Total | Highest | Innings. | Not out. | Runs. | Score. | Average. |
|------------------------|-------|-------|---------|----------|----------|-------|--------|----------|
| H. S. Greaves | 10 | 3 | 281 | 61* | ... | 40'10 | | |
| E. F. Rose | 14 | 2 | 419 | 101* | ... | 34'9 | | |
| J. W. Nunn | 14 | 3 | 361 | 78 | ... | 32'8 | | |
| W. H. Randolph | 10 | 1 | 206 | 35 | ... | 22'9 | | |
| J. A. Willett | 9 | 1 | 157 | 52 | ... | 19'6 | | |
| F. H. Nimmo | 11 | 2 | 156 | 28 | ... | 17'3 | | |
| H. Bond (capt.) | 10 | 0 | 148 | 47 | ... | 14'8 | | |
| E. G. Simmonds | 8 | 1 | 100 | 36* | ... | 14'28 | | |
| H. W. Pank | 4 | 2 | 24 | 13* | ... | 12 | | |
| A. E. Jeaffreson | 8 | 1 | 66 | 21 | ... | 9'4 | | |
| G. W. Stone | 5 | 0 | 36 | 13 | ... | 7'2 | | |

The following also played:

| | | | | | | |
|---------------------|---|---|----|----|-----|-----|
| J. M. Collyns | 6 | 2 | 48 | 20 | ... | 12 |
| A. H. Bostock | 6 | 1 | 19 | 9 | ... | 4'8 |

J. F. Fernie, 29 and 9; D. J. Drake, 36 and 14 not out; H. J. Godwin, 15, 2, 0; G. C. Marrack, 22, 0; T. M. Body, 2, 14, 0; C. G. Watson, 4, 27; G. Wedd, 0; C. H. Turner, 1 not out.

* Not out.

BOWLING AVERAGES.

| | Overs. | Maidens. | Runs. | Wickets. | Average. |
|---------------------|--------|----------|-------|----------|----------|
| H. W. Pank | 149'3 | 29 | 439 | 37 | 11'6 |
| W. H. Randolph ... | 35 | 5 | 135 | 8 | 16'8 |
| H. S. Greaves | 70 | 23 | 170 | 9 | 18'8 |
| E. F. Rose | 220'4 | 46 | 620 | 30 | 20'6 |
| J. A. Willett | 87 | 23 | 220 | 8 | 27'5 |
| H. Bond (capt.) ... | 51 | 14 | 144 | 4 | 36 |

The following also bowled:

| | | | | | |
|---------------------|----|----|-----|----|------|
| A. R. H. Skey | 52 | 18 | 127 | 10 | 12'7 |
| F. H. Nimmo | 22 | 2 | 74 | 5 | 14'8 |
| J. W. Nunn | 16 | 2 | 67 | 2 | 33'5 |
| G. W. Stone | 7 | 1 | 49 | 1 | 49 |
| J. F. Fernie | 28 | 6 | 57 | 1 | 57 |

It will be seen from the above that Pank and Rose have practically borne the brunt of the bowling during the whole season, and the team has suffered all through this season as last from the want of a good change bowler.

The wickets at Winchmore have been, considering the circumstances, excellent, so that next year we ought to be able to get very good wickets indeed.

The photograph of the Past v. Present cricket match, together with two of the ground from different positions, are now ready.

All present and past Bart.'s men who are desirous of obtaining a copy, and who have not already ordered one, can get them by applying to Messrs. Bradshaw and Sons, Newgate Street, E.C.

The statistics of the second eleven, who have had a fairly satisfactory season, have not yet been made out.

ST. BARTHOLOMEW'S HOSPITAL v. THE NONDESCRIPTS.

Played at Winchmore Hill on Saturday, July 20th, and left drawn, the Hospital wanting 3 runs to win with four wickets to fall. Owing to the heavy rain and the late arrival of our opponents play did not begin till four o'clock. The Nondescripts won the toss, and took first innings on a wet and soft wicket.

Their total reached 132, thanks to a very careful innings of Kelson and some hard hitting by Dunn.

With an hour and twenty minutes to play and 133 runs to win we started with Randolph and Nunn.

Play was steady at first, and with the total at 25 Nunn left, Randolph following 12 later for a very well played 27.

On Nimmo joining Greaves runs were put on quickly, and 25 were added before Nimmo was yorked.

Then Greaves, after having started rather shakily, began to make things lively. Hitting all sorts of bowling to the boundary, he piled up runs at a tremendous rate, making a victory look probable. One or two men lost their wicket in trying to force the game, but Greaves went on merrily piling up the runs until time was called, when the score was within two of our opponents, and his individual score 61.

Once more we were deprived of a victory through the want of a few more minutes.

Greaves played a splendid innings without a chance under difficult conditions, and certainly finished up the season in brilliant form. His 61 included 9 fours, 3 threes, 3 twos, and 10 singles.

SCORES.

| THE NONDESCRIPTS. | | ST. BARTHOLOMEW'S HOSPITAL. | |
|---|-----|---|----------------|
| W. H. Kelson, b Skey..... | 27 | W. H. Randolph, b Worthington | 27 |
| H. Wade, c and b Skey..... | 14 | J. W. Nunn, c Beaton, b Worthington | 12 |
| H. C. Preston, c Pope, b Skey | 6 | H. S. Greaves, not out | 61 |
| J. S. Worthington, c Pope, b Greaves..... | 1 | F. H. Nimmo, b Hutchinson | 10 |
| C. D. McMillan, c Randolph, b Skey | 6 | G. W. Stone, b Kelson | 5 |
| A. O. Dunn, b Nimmo | 42 | W. H. Pope, b Kelson | 0 |
| L. Hutchinson, b Nimmo | 21 | A. H. Skey, c Wade, b Worthington | 5 |
| E. W. H. Beaton, not out | 4 | T. M. Body | } did not bat. |
| P. W. James, lb w, b Nimmo | 5 | C. H. Norrington | |
| A. Buoy, absent. | | A. H. Bostock | } did not bat. |
| Extras | 6 | J. M. Collins, absent. | |
| Total | 132 | Extras | 10 |
| | | Total (6 wks.) | 130 |

ST. BARTHOLOMEW'S HOSPITAL v. CLAPTON.

Played at Clapton on Wednesday, July 17th, and left drawn. Nimmo won the toss and elected to bat, sending Jeaffreson and Simmonds to commence the innings on a good hard wicket. Jeaffreson left at 23, and Simmonds at 42. Greaves and Rose quickly put on 20 runs, when the former, failing to get hold of a half volley, skied it to mid-on. Willett playing steadily helped Rose to bring the score to 85, when he was bowled. On Nunn joining Rose a big stand was made, both men playing confidently and well. The score rose rapidly, Rose's cuts and Nunn's off drives evoking constant applause. The bowling was changed frequently, but neither batsman seemed in difficulties, both keeping up their brilliant form of the last fortnight. It was not until the score was raised to 247, or 162 runs for the partnership, that Nunn was caught at slip just when he seemed certain of his century. Rose just after completed his century, and the innings was declared closed with the score at 251 for 5 wickets.

When Clapton commenced their innings rain was beginning to fall, and the rest of the match was carried on under very unpleasant conditions, stumps having to be finally drawn at 6 o'clock after frequent stoppages for rain. Our bowling was terribly weak, so that Clapton managed to amass 96 without losing a wicket, of which Boyton by good clean hitting scored the very large proportion of 80.

Considering that we had a distinctly weak team, especially in bowling, this match was a very good performance indeed.

SCORES.

| ST. BARTHOLOMEW'S HOSPITAL. | | CLAPTON. | |
|---|----------------|-----------------------------|----|
| A. E. Jeaffreson, b Bishop ... | 8 | H. Boyton, not out | 80 |
| E. G. Simmonds, b Bishop... .. | 23 | J. H. Douglas, not out..... | 9 |
| H. S. Greaves, c Provis, b Boyton | 8 | Extras | 7 |
| E. F. Rose, not out | 101 | | |
| J. A. Willett, b Dyke | 13 | | |
| J. W. Nunn, c. Boyton, b Douglas | 78 | | |
| F. H. Nimmo, not out | 0 | | |
| J. M. Collins | } did not bat. | | |
| F. L. Provis | | | |
| T. M. Body | | | |
| C. H. Norrington (absent) | | | |
| Extras..... | 20 | | |
| Total (5 wickets)..... | 251 | Total (0 wicket) | 96 |

ST. BART'S HOSPITAL v. CRYSTAL PALACE.

On Thursday, May 21st, we played the Palace in beautiful weather. Bond won the toss, and naturally elected to bat first, going in himself with Simmonds. The start was unfortunate, as after making 5, Simmonds was beautifully caught and bowled by Bicknell, and Jeaffreson, who followed, was soon out. On Rose coming in the score quickly mounted, the ball going to the boundary frequently, but with 55 on the board Bond was out. Greaves filled the vacancy, and a long stand was made, both batsmen playing beautiful cricket, Rose amongst other strokes making three off drives from Bicknell from consecutive balls. With the total at 140 Greaves ran himself out in a most unlucky manner, and lunch was then taken, Rose having then made 78. Fernie partnered Rose after lunch, but neither stayed long, Rose being lb w with an addition of 6 to his score. He had played splendid cricket for his runs, which included 12 "fours." Willett and Nunn next got together, and both scored fast, especially Willett, who scored more freely than he had yet done this season, and it was not till the score had been raised to 217 that Willett ran himself out after making 52, compiled by free and most attractive cricket. After Willett's departure, Stone stayed for a bit with Nunn, but afterwards the innings soon came to a close, Nunn carrying out his bat for a correctly-played 24, the precursor of some much finer innings.

The Palace started batting with Fleming and Coleman, and a prolonged stand was made, the efforts of Rose, Fernie, and Willett to part them being futile, and it was not till the score had been carried to within "6" of the century that Fleming was dismissed by Willett for a very free innings of 72, which included 10 boundary hits. Hill then made a further stand with Coleman, but cricket became very tedious, Coleman being especially slow in scoring. All hope of winning the match seemed over, and indeed there appeared to be some chance of losing it, but at last Rose got one past Coleman, and he retired for 35. None of the other batsmen offered much resistance to the bowling, and at drawing of stumps seven wickets had fallen for 203, leaving the game drawn much in our favour. Willett got a very good length throughout, and his analysis of 3 for 32 must be considered a very good performance, seeing the state of the wicket. The fielding throughout was good, Simmonds' catch which dismissed Hill being especially smart.

SCORES.

| ST. BARTHOLOMEW'S HOSPITAL. | | PALACE. | |
|--|-----|--------------------------------------|----------------|
| H. Bond, c Dillon, b Bicknell .. | 18 | Captain Fleming, b Willett .. | 72 |
| E. G. Simmonds, c and b Bicknell | 5 | S. Coleman, b Rose..... | 35 |
| A. E. Jeaffreson, c Cipriani, b Bicknell | 8 | G. E. Bicknell, b Willett ... | 6 |
| E. F. Rose, lb w, b Bicknell .. | 84 | F. Hill, c Simmonds, b Greaves | 41 |
| H. S. Greaves, run out | 27 | W. F. Umney, b Willett | 1 |
| J. F. Fernie, c Bicknell, b Umney | 9 | K. B. Alexander, b Fernie ... | 12 |
| J. A. Willett, run out | 52 | D. E. Lockhart, b Rose | 2 |
| J. M. Collins, b Cosens | 1 | Capt. Mainwaring, not out ... | 3 |
| J. W. Nunn, not out..... | 24 | G. Cosens, not out | 4 |
| G. W. Stone, b Fleming..... | 13 | H. Dillon | } did not bat. |
| A. H. Bostock, b Fleming | 1 | A. B. Cipriani | |
| Extras | 22 | Extras..... | 27 |
| Total | 264 | Total (7 wickets) | 203 |

BOWLING ANALYSIS.

| | Overs. | Maidens. | Runs. | Wickets. |
|--------------|--------|----------|-------|----------|
| Rose..... | 20 | 5 | 48 | 2 |
| Fernie | 24 | 4 | 52 | 1 |
| Bond | 9 | 1 | 24 | 0 |
| Willett..... | 15 | 3 | 32 | 3 |

ASSOCIATION FOOTBALL CLUB.

THE prospects of the Association Club are, on the whole, very good this season. The loss of our last year's captain, J. F. Fernie, leaves a great gap in the forward ranks; but we hope to be able to get a good substitute in his place. A good many new names have been added to the list of players since last season, and amongst them we should be able to find at least one or two who will be of service to the team.

The Association ground has been thoroughly fitted out with all requisites by the amalgamated clubs, and affords a very good opportunity for men to go down and practise. One trial game has already

been held, and another will take place on Wednesday, October 9th, when it is hoped that a good number of fresh men will go down to Winchmore Hill and play.

The number of First Eleven fixtures at Winchmore Hill is not so great as we might wish for; but it is extremely difficult for the secretary to find teams willing to come up to the ground without a guarantee. Teams like Hastings, Reigate, Marlow, St. Albans, &c., whose matches are always attended with a good gate, prefer to pay all our expenses to go down and play them on their own ground rather than to come up to London and pay their own expenses. Next year, however, we hope to be able to get fixtures with more of the "Old Boys" teams, and then we can play more matches at Winchmore Hill.

The following is a list of officers for the coming season:

President.—W. H. Jessop, Esq., F.R.C.S.
Captain 1st XI.—R. P. Brown.
Captain 2nd XI.—R. Waterhouse.
Vice-Captain.—E. W. Woodbridge.
Hon. Secretary 1st XI.—L. E. Whitaker.
Hon. Secretary 2nd XI.—C. G. Watson.
Committee.—J. F. Fernie, H. J. Pickering, C. H. Hopkins, E. H. B. Fox, A. Hay, C. A. Robinson, W. Wrangham, J. A. Willett, T. H. Talbot.

FIXTURES FOR OCTOBER AND NOVEMBER ARE—

| | | |
|------------|--|-----------------|
| Sat., Oct. | 5.—Foxes | Winchmore Hill. |
| " " | 5.—Foxes (2nd XI) | Edmonton. |
| " " | 12.—Ealing | Ealing. |
| " " | 12.—Ealing (2nd XI) | Ealing. |
| Wed., " | 16.—Mr. B. A. Glanville's team (Old Wilsonians) | Winchmore Hill. |
| Sat., " | 19.—Barnes | Barnes. |
| " " | 19.—Ormonde F.C. | Winchmore Hill. |
| Wed., " | 23.—Felstead School | Felstead. |
| Thurs., " | 24.—Royal Ordnance | Greenwich. |
| Sat., " | 26.—Windsor and Eton | Windsor. |
| " " | 26.—Kenley F.C. | Kenley. |
| Wed., " | 30.—R.M.A. | Woolwich. |
| Sat., Nov. | 2.—Old Brightonians | Winchmore Hill. |
| " " | 2.—Tonbridge | Tonbridge. |
| Wed., " | 6.—Casuals | Winchmore Hill. |
| Sat., " | 9.—Reigate | Reigate. |
| " " | 9.—Ealing (2nd XI) | Winchmore Hill. |
| " " | 16.—Beckenham | Winchmore Hill. |
| " " | 16.—St. Mary's Hosp. (2nd XI) | Away. |
| Wed., " | 20.—Hastings Athletic | Hastings. |
| " " | 20.—City of London School | Beckenham Hill. |
| Sat., " | 23.—Vol. Med. Staff Corps | Woolwich. |
| " " | 23.—Vol. Med. Staff Corps 2nd XI | Woolwich. |
| Wed., " | 27.—Proprietary School | Ealing. |
| Sat., " | 30.—Crouch End | Hornsey. |
| " " | 30.—Old Vermontians | Winchmore Hill. |

That Old Bart.'s men still take an interest in the sports of the Hospital is shown by the fact that Dr. C. B. Gabb, of Hastings, visited the Hospital on Wednesday, October 2nd, and on behalf of the "Old Bart.'s men" now in practice in Hastings, again kindly invited the Association team to high tea after our match with the Hastings F.C. on November 20th. Knowing how well we were entertained on the same occasion by the Old Bart.'s men before, and by the fact that the Hastings team pay our expenses to go down there, we shall all look forward to the Hastings match for a good day out of London.

Old Students' Dinner.

THE "Old Students' Dinner" was held as usual on the 1st of October in the Great Hall of the Hospital. About 130 were present, including Mr. Howard Marsh, who ably officiated as Chairman, supported by Sir James Paget, Sir Trevor Lawrence, Sir George Humphry, Sir Horace Walpole, Dr. Rutherford, Head Master of Westminster School, Professor Burdon Sanderson, Professor Clifford Allbutt, Mr. Hope-Pinker, Mr. Hanbury, Mr. Trimmer, Captain Spencer Perceval, Mr. Macdonald, Dr. Hill, Master of Downing College, Cambridge, the Dean of Christ Church, Oxford, Mr. Hallett, Father Fleming, Mr. Cross, and most of the Staff of the Hospital and Lecturers and Demonstrators in the School.

The dinner was an excellent one, and the toasts which followed were enthusiastically received. The Chairman first gave the loyal

toasts of "The Queen" and "Prince of Wales, Princess of Wales, and other members of the Royal Family." Mr. Marsh then proposed the toast of the evening, "Prosperity to the Hospital and Medical School." He referred in eloquent words to the great antiquity of the Hospital, and its continued and increasing good in the cause of charity. The historical associations of Smithfield and the old Priory of St. Bartholomew were spoken of. Mr. Marsh laid particular emphasis upon the unity of the Hospital and the School, and the work which all do for the common good. This, he said, was largely due to the influence of Sir Trevor Lawrence, the Treasurer to the Hospital. In well-chosen words he spoke of the great loss the Hospital and profession at large has sustained by the death of Sir William Savory. In the School everything is done to make the educational advantages afforded to students not only second to none, but well abreast of the requirements of the times. The students are now about 550 in number, and the teachers' staff over 60, or 1 teacher to about 9 students. Referring to the honours won by St. Bartholomew's men during the past year, he spoke of the Jacksonian Prize, which has so many times been secured by Bart.'s men, having been taken this year by Mr. H. J. Waring. At the M.S., Mr. Eccles has taken the Gold Medal, and in the M.B. the Scholarship and Gold Medal in Obstetrics has been awarded to Mr. W. E. Lee. Mr. Marsh paid a high tribute of praise to the social organisation of the Hospital and School, to the great good done by the Amalgamated Clubs, by the Hospital JOURNAL, and by the opening of the new ground at Winchmore Hill. During the past year, too, the Rahere Lodge of Freemasons has been initiated. The toast was received and drunk most heartily.

Sir James Paget then proposed the "Visitors," and his son, the Dean of Christ Church, Oxford, replied. He claimed to be not altogether a stranger, having been born at St. Bartholomew's whilst Sir James was Warden. In eloquent words he spoke of how much he owes of success in life to his father, and of the great devotion to duty of the members of the medical profession.

Sir George Humphry then proposed the "Chairman," speaking of Mr. Marsh's solid and sound work as a teacher and a surgeon.

Mr. Marsh replied in an admirable speech, and then proposed the "Secretary," Dr. Hensley.

In the course of his reply Dr. Hensley told the company that this would probably be his last year as Secretary. This is much to be regretted. Dr. Hensley referred to the recent election of Dr. Brunton as Physician and Drs. Herringham and Tooth as Assistant Physicians, and proposed the health of Captain Hinde—who in his reply spoke of the relation of the Army surgeon to other military officers, telling us that of 122 Victoria Crosses, 18 are held by medical officers: soldiering, he said, is easier than doctoring.

Afterwards the company adjourned to the Library for coffee, and altogether a most pleasant evening was spent.

Junior Staff Appointments.

THE following appointments have been made for the six months, October to April:

| HOUSE PHYSICIANS TO— | | |
|----------------------|--|---|
| | SENIOR. | JUNIOR. |
| Dr. Church | W. E. Lee, M.B.(Lond.), L.R.C.P., M.R.C.S. | G. R. Fox, M.R.C.S., L.R.C.P. |
| Dr. Gee | J. K. Murphy, L.R.C.P., M.R.C.S. | F. C. Poynder, M.B., M.R.C.S., L.R.C.P., B.Ch.(Oxon.) |
| Sir D. Duckworth | J. B. Christopherson, B.A., M.B., B.C. (Cantab.) | R. Michell, M.B., B.C., F.R.C.S. |
| Dr. Hensley | K. Rogers, M.D.(Lond.), L.R.C.P., M.R.C.S. | F. M. Burnett, M.B. (Lond.), M.R.C.S., L.R.C.P. |
| Dr. Brunton | F. Belben, M.A., M.B., B.C.(Cantab.), F.R.C.S. | D. W. Collings, M.B. (Lond.), M.R.C.S., L.R.C.P. |

| HOUSE SURGEONS TO— | | |
|--------------------|--|------------------------------------|
| | SENIOR. | JUNIOR. |
| Mr. Smith | C. H. Drake, L.R.C.P., M.R.C.S. | S. Cornish, M.R.C.S., L.R.C.P. |
| Mr. Willett | L. C. P. Phillips, M.B., B.C.Cantab., L.R.C.P., M.R.C.S. | L. Giles, M.R.C.S., L.R.C.P. |
| Mr. Langton | C. P. White, L.R.C.P., M.R.C.S. | C. M. Hewer, M.R.C.S., L.R.C.P. |

Mr. Marsh F. Crossman, L.R.C.P., H. Marshall, M.D.,
M.R.C.S. B.C.Cantab.
Mr. Butlin E. G. B. Adams, W. G. Clark,
L.R.C.P., M.R.C.S. M.R.C.S., L.R.C.P.
MIDWIFERY ASSISTANT.—E. W. Groves, L.R.C.P., M.R.C.S.
EXTERN MIDWIFERY ASSISTANT.—F. H. Lewis, B.A., M.B., B.C.
(Cantab.).
OPHTHALMIC HOUSE SURGEON.—E. J. Toye, M.R.C.S., L.R.C.P.
CHLOROFORMISTS:
SENIOR.—H. J. Paterson, M.B., B.C.Cantab., L.R.C.P.
JUNIOR.—R. A. Walter, M.R.C.S., L.R.C.P.

Clinical Lectures

FOR THE SESSION.

Medical.—Fridays, at 1 p.m., in the Medical Theatre.

| | |
|---|---------------------------|
| Oct. 11th | Sir Dyce Duckworth. |
| " 18th | Dr. Gee. |
| " 25th | Dr. Church. |
| Nov. 1st | Dr. Hensley. |
| " 8th | Dr. Brunton. |
| " 15th | Dr. Church. |
| " 22nd | Dr. Gee. |
| " 29th | Sir Dyce Duckworth. |
| Dec. 6th | Dr. Hensley. |
| " 13th | Dr. Brunton. |
| Surgical.—Wednesdays, at 2.45 p.m., in the Medical Theatre. | |
| Oct. 9th | Mr. Smith. |
| " 16th | Mr. Smith. |
| " 23rd | Mr. Langton. |
| " 30th | Mr. Langton. |
| Nov. 6th | Mr. Langton. |
| " 13th | Mr. Marsh. |
| " 20th | Mr. Marsh. |
| " 27th | Mr. Marsh. |
| Dec. 4th | Mr. Butlin. |
| " 11th | Mr. Butlin. |

Gynaecological.—Dr. Champneys, Thursdays, at 9, in Medical Theatre.

Pathological Laboratory.

BACTERIOLOGY.

The next course of Elementary Bacteriology and of Practical Bacteriology for the D.P.H. Examination will begin on Monday, October 14th, at 2 p.m. Further days and hours will be arranged then. Gentlemen intending to attend are requested to communicate with Dr. Kanthack.

TUTORIAL CLASSES.

M.B. (London).—Dr. Kanthack holds his Tutorial Classes in Medical Pathology on Tuesdays and Fridays from 9.30 to 10.30. Gentlemen preparing for the Cambridge Examination in December are invited to attend now.

F.R.C.S.—Candidates for the next final F.R.C.S., B.S. (London), and B.C. (Cambridge), are invited to attend Dr. Kanthack's Tutorial Classes in Surgical Pathology on Tuesdays and Thursdays at 4.30 p.m.

PATHOLOGICAL CLERKS.

There are several vacancies in the Pathological Department. Gentlemen willing to act as clerks are requested to communicate with Dr. Kanthack.

Appointments.

HOGARTH, R. G., F.R.C.S. Eng., has been appointed Senior Resident Medical Officer to the General Hospital, Nottingham.

CALVERLEY, J. E. G., M.R.C.S., L.R.C.P., has been appointed Senior House Physician to the Metropolitan Hospital.

DUNN, W. E. N., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to the Metropolitan Hospital.

HAMPTON, T., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Metropolitan Hospital.

BENNETT, W. E., F.R.C.S., has been appointed Senior House Surgeon to the Metropolitan Hospital.

At the moment of going to press we hear with regret that Mr. Mark Morris, the well-known steward of the Hospital, died at Plymouth on October 16th. A fuller notice will appear in our next issue.

Correspondence.

To the Editor of St. Bartholomew's Hospital Journal.

SIR,—On reading through my rather hurriedly put together paper in the JOURNAL for September I notice that I have omitted to mention one point which is an additional piece of evidence in favour of the differentiation between the cause of the symptoms of mal de montagne and of those of aëronauts.

I drew particular attention to the fact that mountaineers, as a rule, do not suffer from bleeding at the nose; but I forgot to add that it is very commonly met with in aëronauts, and has often been seen in those suffering from caisson disease.

I also made a slight error in stating that no one has yet tried to ascribe a different cause to the symptoms of aëronauts and those of mountaineers; for I find, on referring to my notes, that M. Lortet, in his 'Deux Ascensions aux Mont Blanc,' hints at such a view of the case.—I am, Sir, your obedient servant,

Lowestoft.

MALCOLM L. HEPBURN.

To the Editor of St. Bartholomew's Hospital Journal.

"ESPRIT DE CORPS."

SIR,—My bewilderment on reading the letter of your correspondent "Neo-Pessimist" was very great. With his conclusion I suppose I nearly agree, but should hardly arrive at mine in such a curious way. After denying the right of "Esprit de corps" to be classified as an axiom, he himself calls it an intuition, but only applicable to himself. Now Mill gives also as examples of *a priori* fallacies the so-called intuitions. If, then, "Neo-Pessimist" had said at first when quoting Mill that "esprit de corps" was a fallacy of wrong intuition, as he justifiably might have, where would have been the difference between his conclusion of the whole matter and his "Esprit de corps preachers"? They have it as an axiom, *he* an intuition. His only restriction, which is insignificant, is that the quality is one of "personal protoplasm," peculiar to himself, not a matter of praise or blame. But he himself is only an example of some millions of his fellows, so that these restrictions become unnecessary. Majorities are not always wrong. When they are, the fact is so dinned into our ears, we begin to think it is only right to be in the minority. Hence the fallacy of the "loyal minority." If my watch differs from some hundreds more there is small chance that mine is the only right one. As regards his final syllogism, which I think is neatly put, if (and this "if" is greatly open to doubt) his premises are correct we find no difficulty in agreeing with his conclusion, which is perfectly logical. We congratulate him on having the "well-developed mind" which it is necessary for *him* to have in order to have "esprit de corps." "(1) Happiness," he says, "is the sole object of existence; (2) Happiness finds a place in 'esprit de corps' in well-developed minds; (3) Therefore 'esprit de corps' has a place in the object of existence." It is with the major premiss that we are inclined to differ. The rest of what he says requires more criticism. He seems to write as if he thought "esprit de corps" takes time, surely we may inculcate it by example and precept all times of the day? Lastly, do we not often praise because a given act so often justifies blame, and blame because we have often rightly praised or at least said nothing? I entirely differ from his insinuations of the usual laziness of Cambridge men: search the teams, clubs, and subscription lists. But perhaps their names are there from folly or egoism! Preserve us from this analyser! Into the questions of responsibility, liberty, and necessity, &c., which arise from this pregnant topic it is impossible for me to follow. Our first question in life is why, later why and how, last where. Why have I esprit de corps? Because I am a "gentleman," or try to be. I am like a woman—I have it because I have. This is the intuition of "Neo-Pessimist," the axiom of others. What's in a name?—Enclosing my card, I am, dear Sir, yours faithfully,

QUIDAM MEDICUS.

To the Editor of St. Bartholomew's Hospital Journal.

THE DRINK OF CHRIST ON THE CROSS.

SIR,—The points arising from Dr. Maidlow's paper and the letter of "One Interested" are also very interesting to me, and there is no need, I think, for apology in discussing these subjects. The Bible was made for man, intellect is given for use. In the first place, Sir, some of the remarks of "One Interested" require criticism. He says in effect gall and myrrh both mean something gummy, and suggests gum-opium, and the drink in which they existed was refused from its gummy nature, as is proved by the acceptance of the vinegar subsequently, as described "by St. Matthew and St. Mark." But St. Mark (xv, 36) does not record its acceptance, neither does St. Matthew (xxviii, 48). But St. John (xix, 29, 30) does say vinegar was accepted,

If "One Interested" had quoted this his case would have been strengthened. The conclusion, however, I arrive at really differs very little from that of "One Interested;" it may be the same, and I am misunderstanding him. If so, I apologise. Mine is that the gall and myrrh *do* mean gum, and that gum-opium, a narcotised drink. It was not refused because nasty; it might even have been accepted for this reason. Christ had no wish to be relieved from His actual pain and die narcotised, but had no objection to having thirst relieved by vinegar, which is refreshing, as is shown by the fact that St. Luke (xxiii, 36) says it was *offered*, accompanied by mocking, as if they were tantalising. The "Lesson Finders" would find in the act a lesson that, however great our sufferings and diseases, the lethal chamber is not the proper treatment. We must die, when possible, with unclouded minds. There is evidence that in Jerusalem there was an association of ladies to mitigate the sufferings of the crucified. These were allowed to procure a narcotised drink of some kind. What more likely than opium (laudanum is *not* derived from Laudanum, but from ladanum, a gum or balsam). Another less material explanation supposes that the Great Martyr refused relief from suffering. Thus Keble (*Christian Year*)—"The parching thirst of death was on Him." He would not drink "nor overcloud His soul, so clear in agony." It was in keeping with the martyrdom. But He afterwards drank to give us a lesson that distress may be alleviated by us mortals, and so gives us medicals our *raison d'être*. Now in this there seems some inconsistency; hence I prefer my more "material" theory. But we must in any case remember (1) the English translation is often from Hebrew through Greek to English—hence the variation of real meaning; (2) the discordance of the synoptic accounts with St. John's; (3) that the death of a perfect man must be perfectly physiological.

Another question I wish to raise is, what is hyssop? Some references are—"Purge me with hyssop, and I shall be clean" (Psa. li); "Ye shall take a bunch of hyssop and dip it in blood, and strike the lintel," &c. (Exod. xii, 22; St. John xix, 29). The vinegar accepted by Christ on the cross was handed on hyssop. The other Gospels (synoptic) have "on a reed" (SS. Matthew xxviii, 48, and Mark xv, 36). Does it mean that hyssop is a plant valuable for its mechanical advantage of saturation? The word in Psa. li would still be justifiable from its association with the sacrifice and feast of Passover.—I am, dear Sir, yours faithfully,

ANOTHER INTERESTED.

To the Editor of St. Bartholomew's Hospital Journal.

THE ST. BARTHOLOMEW'S HOSPITAL AMATEUR DRAMATIC CLUB.

SIR,—It has been a great pleasure and interest to peruse the very able article in the September number of your JOURNAL on the birth, growth, and work of our most popular A.D.C. Written, as no doubt it was, by one thoroughly cognizant of its intimate history, and fired by all its youthful and ambitious aspirations, it re-awakens in me many pleasant memories, strengthens the dear old ties, and revives all the sweet associations of our Alma Mater at yuletide.

It is striking how the old points of divergent policies seem to be ten times more accentuated by time, and present themselves clothed in all the startling freshness of a new decade.

The writer in his article insists on three factors, on which should depend the future success of the Club. Bear with me while I essay to discuss them *seriatim*.

In primo, on the subject of new members nothing is more desirable than that the energy of the older members should be displayed in seeking out all those who have shown elocutionary talent at school or college. At the same time it must be borne in mind that some of our best actors have been met with in those who have had the advantages of neither, so that an observant eye should be kept on the entire mass of students in their earlier years.

The second factor is the introduction of ladies to the Club, and this has been a crucial and important question for many years.

For my own part, I have always strenuously and emphatically opposed this innovation, as liable, nay certain, to endanger the best interests, even sap the very vitality of the Club. One of the strongest arguments against this innovation was the very significant failure which attended the introduction of this new feature into the entertainment in 1889. This is freely admitted by your contributor.

Another equally cogent reason is the silent but steady disapproval of the hospital authorities and staff, and also of our worthy President himself, Mr. Cross, who has worked so loyally, and been of such inestimable value to the Club.

It is also needless to deny that the presence of ladies certainly curtails the freedom, times, and duration of rehearsals, and implies chaperone and escort difficulties.

The appointments of rehearsals are necessarily difficult to fix where

persons not in personal and professional contact with the hospital are included in the cast.

Again, the complaint of insufficiency of parts for the members of the Club would be doubly intensified by the characters being undertaken by ladies.

There is also this very serious conclusion to consider, that professional ladies add very materially to the expenses of the Club, and, if amateurs, are not necessarily as good actors as the students.

There is much to be said also on the restraint exercised behind the scenes during the play being very irksome, and the curtailments of the green-room and dressing-room accommodation.

On the other hand, the patients like particularly to see the ladies' parts taken by their own Clerks and Dressers.

The Nursing Staff prefer to see the caricatures of their own sex on the stage, and to the surgical and medical staff, the students, and their friends it is universally popular. It may be "buffoonery," but it is certainly more amusing than that the parts should be taken by unfamiliar and indifferent actresses. And the Dramatic Club must be reminded that the audience do not come to see a company rivalling in dramatic art some of our best London theatres (when the Lyceum and Garrick are not one hundred miles away). If that were so it would be infinitely better to take Drury Lane Theatre during the pantomime season for a succession of nights, and arrange for the patients, nurses, staff, &c., to be transferred there. Moreover the Christmas entertainment is intended essentially to be a rallying-point or reunion *en famille* for all those connected with the Hospital, and it is this homely influence which pervades all, and especially this entertainment, and that endears us so much to our Alma Mater. If this is "the greatest insult that can be offered," why suggest a further nocturnal shower of insults to the already offended and outraged audience?

Thirdly, by all means allow all students to attend if they wish; but, finally, keep closely to the old modest and unpretentious lines of the Christmas entertainment with students in the ladies' parts, and should a dramatic performance be given with ladies let it be entirely disconnected from the Hospital, and entirely outside its precincts, is the advice of a late assistant stage manager.

THE DOWAGER DUCHESS.

Reviews.

MEDICAL ELECTRICITY: A PRACTICAL HANDBOOK FOR STUDENTS AND PRACTITIONERS, by H. Lewis Jones, M.A., M.D. (London, H. K. Lewis), cr. 8vo, price 10s. 6d., second edition.—The first edition of this work was described as "*Medical Electricity*," by W. E. Stevenson and H. Lewis Jones, and was so well known that this, the second, edition requires little introduction to the public.

The first five chapters of the book contain a succinct account of the general principles of electricity, and will be found useful by those from whose minds time has wiped their earlier knowledge of the subject. The remaining eleven chapters deal with Medical Electricity proper, and explain thoroughly its method of employment, and the varieties of disease in which its use is found beneficial. The electrolysis of *nævi* is fully explained, as also that of urethral strictures. The Apostoli treatment of uterine fibroids occupies eight pages, but though the opinions of several authorities in regard to its results are given, we notice that the writer does not give us his own conclusions. In reading it we are reminded of a remark of one of our surgeons when speaking of this method of treatment, "Let them electrolyse a good fibroma on the buttock, and then we shall be able to judge of their success when dealing with tumours in the depth of the abdomen."

In the preface the present author states that want of general knowledge of the subject has caused some to regard electrical treatment with coldness, and that others have condemned it because it will not work miracles. The book before us should do much to improve this condition of affairs, and we commend it heartily. It is undoubtedly the best text-book dealing with this subject.

Birth.

BENJAMIN.—Sept. 17, at the Old Hall, Dorrington, near Shrewsbury, the wife of J. K. Kinsman Benjamin, M.R.C.S., L.R.C.P., of a daughter.

ACKNOWLEDGMENTS.—*Guy's Hospital Gazette*, *St. Thomas's Hospital Gazette*, *St. George's Hospital Gazette*, *Nursing Record*, *Dental Materia Medica and Therapeutics*, by JAMES STOCKEN, L.D.S.Eng., 4th edition, revised by Stocken and Butcher (H. K. Lewis), *Elements of Medicine*, by ALFRED H. CARTER, M.D.Lond., 7th edition.